

## **ABSTRACT**

A boost circuit capable of boosting a reference voltage into an output voltage. The boost circuit includes a main transistor electrically connected to the output voltage, an auxiliary transistor electrically connected to the output voltage, a pre-charge circuit electrically connected to the main transistor and the auxiliary transistor for pre-charging the main transistor and the auxiliary transistor, and a voltage detector electrically connected to the auxiliary transistor and the reference voltage for controlling the auxiliary transistor according to the reference voltage.